

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: : PERPENDICULAR MAGNETIC
: RECORDING MEDIA WITH
BIN LU ET AL. : LAMINATED MAGNETIC
: LAYER STRUCTURE
: Attorney Docket No. SEAG 63332

INFORMATION DISCLOSURE STATEMENT

June 26, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR Sections 1.56, 1.97 and 1.98,
Applicants submit herewith copies of the references cited on the attached Forms
PTO/SB/08A and PTO/SB/08B for consideration during prosecution of this application.

This Statement is filed solely for the purpose of complying with the
pertinent rules of the Office and is not intended to be a substitute for an independent
evaluation by the Examiner of the art cited or an independent search by the Examiner,
and no representation of any nature is made or intended by the filing of this Statement.

Respectfully submitted,

Robert P. Lenart

Robert P. Lenart
Registration No. 30,654
Pietragallo, Bosick & Gordon
One Oxford Centre, 38th Floor
301 Grant Street
Pittsburgh, PA 15219
Telephone No.: (412) 263-4399
Facsimile No.: (412) 261-0915
Attorney for Applicants

Please type a plus sign (+) inside this box



Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	
				Filing Date	
				First Named Inventor	Bin Lu
				Group Art Unit	
Examiner Name					
Sheet	1	of	4	Attorney Docket Number	SEAG 63332

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		4,568,599		Ono et al.	02-04-1986	
		4,749,628		Ahlert et al.	06-07-1988	
		4,792,486		Ishizaka et al.	12-20-1988	
		4,966,821		Kawashima et al.	10-30-1990	
		5,429,855		Kotani et al.	07-04-1995	
		5,942,342		Hikosaka et al.	08-24-1999	
		6,083,599		Hirayama et al.	07-04-2000	
		6,183,893		Futamoto et al.	02-06-2001	
		6,372,330		Do et al.	04-16-2002	
		6,395,413		Ando	05-28-2002	
		6,506,508		Yoshida et al.	01-14-2003	
		6,511,761		Tanahashi et al.	01-28-2003	
		Publication No. 2001/0008716		Matsuda et al.	07-19-2001	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box ☐

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE ☐

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	
				Filing Date	
				First Named Inventor	Bin Lu
				Group Art Unit	
				Examiner Name	
Sheet	2	of	4	Attorney Docket Number	SEAG 63332

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		Publication No. 2001/0033949		Abarra et al.	10-25-2001	
		Publication No. 2002/0009620		Hanawa et al.	01-24-2002	
		Publication No. 2002/0064691		Kanbe et al.	05-30-2002	
		Publication No. 2002/0068199		Futamoto e al.	06-06-2002	
		Publication No. 2002/0132139		Chang et al.	09-19-2002	
		Publication No. 2002/0136929		Oikawa et al.	09-26-2002	
		Publication No. 2003/0017370		Shimizu et al.	01-23-2003	

FOREIGN PATENT DOCUMENTS								
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box



Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	
				Filing Date	
				First Named Inventor Bin Lu	
				Group Art Unit	
				Examiner Name	
Sheet	3	of	4	Attorney Docket Number	SEAG 63332

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		Publication No. 2003/0039071		Okuyama et al.	02-27-2003	
		Publication No. 2003/0039863		Chen et al.	02-27-2003	
		Publication No. 2003/0059650		Nakagawa et al.	03-27-2003	
		Publication No. 2003/0064249		Uwazumi et al.	04-03-2003	
		Publication No. 2003/0082407		Sakawaki et al.	05-01-2003	
		Publication No. 2003/0091798		Zheng et al.	05-15-2003	
		Publication No. 2003/0096140		Tomiyasu et al.	05-22-2003	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box



Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	
				Filing Date	
				First Named Inventor	Bin Lu
				Group Art Unit	
				Examiner Name	
Sheet	4	of	4	Attorney Docket Number	SEAG 63332

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		Publication No. 2003/0099866		Takahashi et al.	05-29-2003	
		Publication No. 2003/0104250		Shimizu et al.	06-05-2003	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box ☒ Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	
				Filing Date	
				First Named Inventor	Bin Lu
				Group Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	SEAG 63332

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Y. YAMADA ET AL., "Large Magnetic Anisotropy in Co ₃ Pt Ordered Phase Thin Films," <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 517, 1998, pp. 299-310.	
		Y. KUBOTA ET AL., "Intergrain Magnetic Coupling and Microstructure in CoPtCr, CoPtCrTa, and CoPtCrB Alloys," <i>Journal of Applied Physics</i> , Vol. 84, No. 11, December 1, 1998, pp. 6202-6207.	
		D. WELLER ET AL., "High K _u Materials Approach to 100 Gbits/in ² ," <i>IEEE Transactions on Magnetics</i> , Vol. 36, No. 1, January 2000, pp. 10-15.	
		B. LU ET AL., "Study of Stacking Faults in Co-Alloy Perpendicular Media," <i>Journal of Applied Physics</i> , Vol. 91, No. 10, May 15, 2002, pp. 8025-8027.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.